REMARKS

Entry of this amendment, reconsideration, and allowance are requested.

The new claims correspond to subject-matter of the previous claims, but incorporate dependent claim features. New claim 56 comprises subject-matter of claims 1, 4, and 10. New claim 71 comprises subject-matter of claims 10, 16 and 19. New claim 85 comprises subject-matter of claims 10, 30 and 33. New claim 93 comprises subject-matter of claims 10 and 38. New claim 102 comprises subject-matter of original claims 10 and 47. There are no new issues since no new matter has been added to the claims. In addition, these amendments place the application in condition for allowance. Accordingly, entry after final is appropriate.

Claim 1 stands rejected for anticipation based on Lan. This rejection is respectfully traversed.

Lan discloses a resource allocation method (Abstract, paragraph 21) in a communication system (Fig. 7) having resources (timeslots). But Lan does not disclose dividing the resources into at least a first resource class having a first associated characteristic allocation time and a second resource class having a second associated characteristic allocation time that is longer than the first associated characteristic allocation time based on respective associated characteristic allocation times of the resources. In contrast, Lan differentiates the timeslots based on a ratio of carrier power and propagation loss for those resources. See paragraphs 9, 27, and 31.

The Office Action refers to Figs. 5-6 and 14a-b and paragraphs 90-93, 203, 223-233, 243 as supposedly dividing the resources into at least two resource classes based on the characteristic allocation times of the resources. Figs. 5-6 and 14a-b merely illustrate how timeslots (resources) are organized into frames and can be assigned to users or be idle. Paragraphs 90-93 and 203 explain that timeslots (resources) are assigned to the users according to service class by assigning

the maximum or the minimum number of timeslots to the user based on the service class of that user. Thus, a user is either assigned B timeslots or W timeslots. In other embodiments in paragraphs 223-233 and 243, users are divided into service class 1 users and service class 2 users. Timeslots are allocated to assure maximum quality for the service class 1 users. This means that service class 1 users are assigned the maximum number of timeslots if available, otherwise, the desired amount of timeslots if available, or otherwise, timeslots are released from service class 2 users for assignment to service class 1 users. Service class 2 users are assigned timeslots on a best-effort basis.

The Examiner opines that when dividing the resources in Lan, each part of the resource has a class, and thus, certain parts of the resources are class 1, while other parts are class 2. But that interpretation is untenable. As pointed out above, Lan discloses that timeslots currently allocated to a service class 2 user can be released and allocated to a service class 1 user if the number of available timeslots is less than the desired number of timeslots as requested by the service class 1 user in his/her QoS request. In this scenario and applying the Examiner's reasoning, a class 2 resource suddenly becomes a class 1 resource and belongs to a different resource class and thereby suddenly has a different characteristic allocation time.

Because claim 56 specifies that the resources of the first resource class should have a shorter allocation time than the resources of the second resource class, this means, using the Examiner's reasoning, that allocating the now-released timeslot to the service class 1 user would now take longer or shorter time as compared to allocating the same resource to the service class 2 user. This does not make sense because the same resource allocation procedure is used when allocating the resource--regardless of the service class. Allocating a maximum number of timeslots, a desired amount of timeslots, or a minimum number of timeslots for a user, according

to Lan, takes the same amount of time. The base station determines how many timeslots are available for a particular user and then sends this information to the user (see paragraphs 69-70, 74, 90, 93, 97). The same processing and signaling must be performed regardless of the amount of timeslots that are allocated.

The Examiner also seems to confuse "resource" and "associated characteristic allocation time." The Office Action indicates that the maximum and minimum numbers of timeslots, as indicated in the QoS request from the user, corresponds to the claimed characteristic allocation time. But a timeslot is a resource that can be allocated with an allocation procedure and that the allocation takes a characteristic allocation time. Thus, a timeslot resource cannot simultaneously be an associated characteristic allocation time.

Claim 56 further includes that the first resource class resources are allocable with an allocation procedure of a first allocation procedure set and the second resource class resources are allocable with a resource allocation procedure of a second, different allocation procedure set. Lan lacks this feature. Instead, all timeslots (resources) allocated according to QoS requirements in Lan are allocated in the same manner as mentioned above. Consequently, there is no differentiation of allocation procedures into two allocation procedures sets as recited in claim 56.

Lacking features recited in the claim, Lan therefore fails to anticipate claim 56.

Many of the original claims stand rejected for anticipation based on Jurkevich. This rejection is respectfully traversed.

Jurkevich discloses a resource allocation method in a communication system (Figs. 1, 4; column 4, lines 63-68; column 10, lines 37-41) having resources corresponding to timeslots (column 4, lines 48-54; column 14, lines 30-32). Different traffic types, voice, video and data, are assembled into a sequence of composite frames (Abstract; column 4, lines 51-54; column 5,

lines 46-50; column 7, lines 27-32; column 14, lines 30-36). Traffic component types are grouped into sets of fixed bandwidth channels. Each traffic component type is assigned a number of timeslots (column 4, lines 45-53), and each traffic component type is limited to channels containing traffic components of the same type (Abstract). Additionally, each traffic component type has an associated priority and a minimum and a maximum allowable bandwidth (column 6, lines 48-51; column 7, lines 27-32; column 21, lines 27-35; column 22, lines 24-25) used in congestion situations to determine from which traffic component type the currently used bandwidth exceeds the minimum guaranteed level for that traffic component type (column 22, lines 57-62; column 26, lines 26-38; column 28, lines 40-56; column 29, lines 17-19).

Thus, Jurkevich divides resources (channels=timeslots) into different resource classes based on the traffic component type and the bandwidth parameters assigned to the traffic component type. But Jurkevich does not divide resources based on characteristic allocation time.

The Office Action refers to the T-slot bandwidth allocation profile table in column 22 as disclosing the division of resources into different resource classes based on respective associated characteristic allocation time. Applicant respectfully disagrees. Jurkevich discloses that each traffic component type is assigned a T-slot type, see column 14, lines 30-39, such as a T-slot of X.25 data, a T-slot of ADPCM voice data, and a T-slot of SDLC-data, see Fig. 5. Each such T-slot type has certain associated parameters, such as minimum/maximum bandwidth, priority as illustrated by the tables of column 21 and 22. Each channel has a fixed bandwidth, see Abstract, and a channel is a timeslot, see column 4, lines 47-48. Thus, the minimum/maximum bandwidth parameters correspond to the number of timeslots that are allocatable to the different traffic component types.

During congestion and flow control, timeslots (corresponding to bandwidth) are taken from traffic component types exceeding their minimum bandwidth and are reallocated to another traffic component type requesting additional bandwidth, see column 6, lines 40-51; column 22, lines 57-62. Thus, a timeslot previously allocated to a first traffic component type having a first T-slot type is re-allocated to a second traffic component type having a second T-slot type. This is actually the same priority or QoS-based reallocation procedure disclosed by Lan. So the deficiencies noted above with respect to Lan apply.

The allocation of the resources among the traffic component types with T-slot types according to Jurkevich is based on the bandwidth parameters associated with the T-slot types. Resources are allocated according to the QoS-requirements of the T-slot types, and thus, resource allocation is based on *the number of resources* is needed to meet these QoS requirements. The *number of allocated resources* is different from the *characteristic allocation time* of the resources. Nor does the number of resources to be allocated affect the characteristic allocation time it takes to allocate resources. Because Jurkevich uses the same resource allocation procedure regardless of the traffic component type and T-slot type, there is no difference in characteristic allocation times of the resources disclosed therein and no division of resources into resource classes based on such characteristic allocation times.

Jurkevich also does not disclose that different allocation procedure sets are available for the different resource classes.

Lacking multiple claim features, Jurkevich fails to anticipate claim 56. Corresponding distinguishing claim features are also recited in claims 71 and 85.

Claim 93 also recites that the first resource class has a characteristic allocation time that is shorter than the characteristic allocation time of the second resource class. The Examiner

refers again to the tables in columns 21 and 22. But these tables merely illustrate that different T-slot types, and therefore different traffic component types, have different bandwidth parameters. Jurkevich merely defines the number of resources that can be allocated to the T-slot types but does not disclose that resources of a first resource class (traffic component type/T-slot type) have a shorter characteristic allocation time as compared to a second resource class.

Jurkevich discloses that in congestion or flow control situations bandwidth, i.e. a number of timeslots according the discussion above, can be taken from a traffic component type having bandwidth in excess of the minimum bandwidth for that T-slot type and be allocated to a requesting traffic component type, see column 6, lines 40-51; column 22, lines 57-62. The Examiner contends that this corresponds to triggering resource allocation for a second resource class and temporarily allocating resource amount of the first resource class during progression of the resource allocation for the second resource class. But this is technically impossible. In Jurkevich, bandwidth (corresponding to a number of timeslots) is seized from a second traffic component type/T-slot type and allocated to a first traffic component type/T-slot type. It is technically impossible to temporarily allocate any resources to the first traffic component type/T-slot type during the seizure of the resources from the second traffic component type as there are no resources to allocate. Thus, no resources can be temporarily allocated while the resource allocation of the resources of the second resource class is progressing. Jurkevich triggers resource allocation (seizure) for the second traffic component type/T-slot type to free resources, and once this resource allocation is completed, the freed resources can be allocated to the first traffic component type/T-slot type.

Consequently, there is no disclosure of any temporary allocation of a first amount of resources of the first resource class during the progression of the resource allocation for the

second resource class. Additionally, Jurkevich does not disclose that different allocation procedures are used for the resources depending on the resource class they belong to.

The Examiner correctly identifies that Jurkevich does not disclose that the temporary allocation of the first resource amount is smaller than the guaranteed minimum resource amount. Instead, Jurkevich provides at least a minimum guaranteed bandwidth to the traffic component types/T-slot types. The Examiner relies on Profumo.

Profumo relates to bandwidth assignment in an ATM transmission system having a mechanism for dynamic allocation that guarantees that a mobile station always can be assigned a minimum guaranteed bandwidth (column 2, lines 46-49). Part of this minimum guaranteed bandwidth can be momentarily freed if the mobile station has no need for it (column 2, lines 50-53; column 2, line 66 to column 3, line 3).

Even assuming for argument's sake, that Profumo may be combined with the resource allocation in Jurkevich such that minimum bandwidth guarantees can be breached, that combination fails to teach all the features in claim 93. As explained above, Jurkevich is technically incompatible with temporary allocating resources of a first resource class during the progression of the allocation of resources of a second resource class since there are no free resources during the flow control procedure to temporarily allocate. So it is not possible to temporarily allocate resources of the first resource class in breach of a QoS agreement. In fact, it is not possible to temporarily allocate any resources at all until they are freed after the completed allocation of the second resource class. There are no resources to temporarily allocate for a first resource class while the resource allocation of a second resource class is progressing. Thus, the proposed combination would not teach 93 and would not have been made by a person skilled in

the art. Corresponding system claim 101 is obvious over the combination of Jurkevich and Profumo for the same reasons.

The amendment should be entered, the rejections withdrawn, and the application allowed.

Respectfully submitted,

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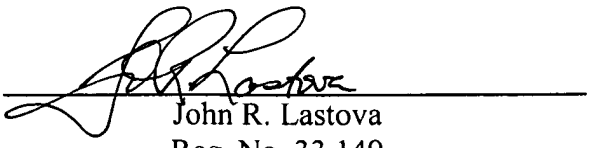
By: 
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